



SPACE FLORIDA



2021 ANNUAL REPORT





**ANNUAL REPORT 2021**  
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# LETTER TO THE STAKEHOLDERS

Dear Stakeholder:

I am pleased to report another strong year for Florida's aerospace industry. Space Florida continues to build on our state's storied legacy as a launchpad of space exploration where innovators look to the future and inspire millions across our state, our nation, and the world. With each launch and project announcement, we are strengthening Florida's position as the premier location for aerospace.

This past year has been full of accomplishments in the commercial space sector in Florida as we welcomed Sierra Space and Terran Orbital to Space Florida's Launch and Landing Facility, continued to foster international relationships such as the Florida-Israel Innovation Partnership, and witnessed more crewed lunches from the Space Coast.

More than 30 launches blasted off from Florida last year. Florida continues to invest in our space industry and the increasing number of launches is a testament to the dividends paid by those investments. Behind every rocket launch is a network of innovation and economic development that enriches the lives of Floridians through our continued collaboration with the industry's top private sector companies, including SpaceX, OneWeb Satellites, Blue Origin, Boeing, Lockheed Martin, Redwire, and others.

I am proud of my administration's support of the aerospace industry and I am excited to see what future technological advancements and scientific knowledge will result from our efforts. We will continue to promote career readiness and a skilled workforce to sustain the thriving commercial space industry. Many Florida students graduate from a Florida college, technical center, or university and enter the aerospace workforce with high wage, high skilled careers, from the investors and rocket scientists who envision the future to the welders and machinists who make their visions a reality.

Thank you to Space Florida for your efforts to ensure Florida remains the global leader in the space industry. Florida has a bright future, and I look forward to seeing what we can accomplish in the years to come.

Sincerely,



Ron DeSantis  
Governor



**RON DESANTIS**  
GOVERNOR,  
STATE OF FLORIDA





# MESSAGE FROM SPACE FLORIDA CHAIR OF THE BOARD

Dear Stakeholder:

I've had the distinct honor to serve as Chair of Space Florida's Board of Directors again this year, helping Space Florida position the Sunshine State as the leader in the aerospace industry.

Despite the continuing challenges due to the COVID-19 pandemic, Florida's aerospace sector has been busier than ever and space remains a key component in our state's business ecosystem. Space Florida Board of Directors, with unwavering support from Governor Ron DeSantis, worked diligently to solidify Florida's role in the global space economy as well as ensuring a business-friendly environment for attracting aerospace companies.

We watched as various critical missions lifted off from Florida's Space Coast. Additionally, we welcomed Sierra Space and its Dream Chaser space plane to Florida and continued our long-standing partnership with the Israel Innovation Authority. Our accolades continue to grow in size and scope.

The aerospace industry represents a key part of the State's strategy for post-pandemic economic recovery, and Space Florida has good reason to be enthusiastic about the future of aerospace. In working with other economic development partners, Space Florida remains committed to creating a driving force in recruiting and retaining related industries to our state.

I sincerely thank the Space Florida Board of Directors for its leadership. The commitment to make Florida's space industry the top in the nation is key to our success. Thank you to President and CEO Frank DiBello and the entire Space Florida team for the work they do, as well.

The future of this industry is very bright, representing an increasingly important segment of Florida's economy. Governor DeSantis and I look forward to the opportunities yet to come. Space Florida is ready to make Florida the world's launch pad for aerospace commerce, research, investment and exploration.

Sincerely,

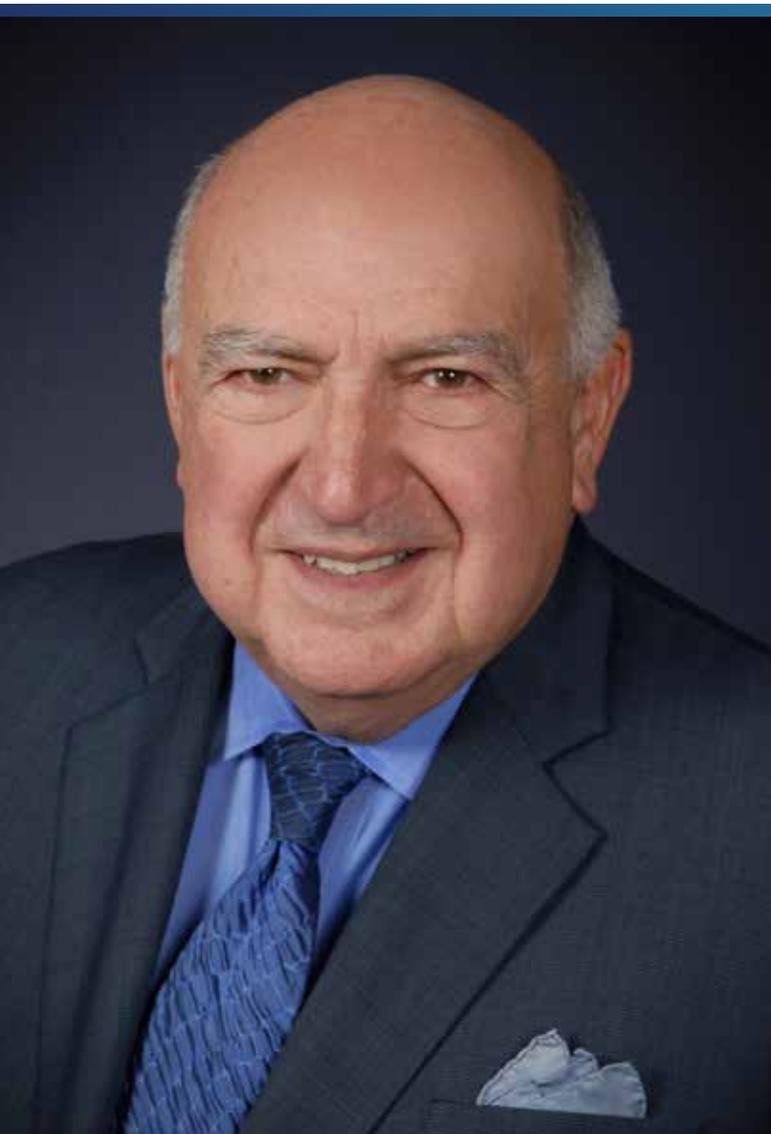
Lieutenant Governor Jeanette Nuñez  
*Chair, Space Florida*



**LIEUTENANT  
GOVERNOR  
JEANETTE M. NUÑEZ,**  
CHAIR OF THE BOARD,  
STATE OF FLORIDA

# MESSAGE FROM THE PRESIDENT & CHIEF EXECUTIVE OFFICER

SPACE FLORIDA



The year 2021 has again provided good reason for us to remain passionate about Florida's future as a major aerospace state and the global leader in ushering in a bold new space-based economy! Our industry again achieved historic and game-changing accomplishments, and, with increasing frequency, shaped Florida's path as an aerospace and space industry leader into the future.

A handwritten signature in white ink that reads "Francis D. Dibello". The signature is fluid and cursive.

**FRANK DIBELLO**

*President & Chief Executive Officer,  
Space Florida*



While the year started with the profound loss of a dear friend and most valued member of our team, James M. Kuzma, Senior Vice President and General Manager for Spaceport, Space Florida mourned his loss and kept focused on the mission we have, in his honor. Jim was a friend, mentor to staff and strategic leader who will be missed! The successes that Florida's spaceport system achieved are a clear demonstration of the importance of the continued investments he championed in growing our space industry and modernizing our state's spaceport capabilities.

Additionally, Space Florida staff were given the challenge to form a team and work together to develop a set of "Core Values" for the corporation. Values that would identify who we are, how we act, and how we want others to see us through our actions! Over the course of a year and a half, this Core Values task force, in a collegial and inclusive way developed a set of core values and socialized them, enabling the entire organization to embrace and now actively live by them every day. This was a very proud achievement for the staff and the organization. They own them and "they" are us!

In this past year, we all watched as yet another SpaceX crewed launch lifted off from Florida's Spaceport – with American astronauts flying on an American spacecraft to the International Space Station (ISS), and then celebrated their safe return. Later in the year, competing head-to-head with fellow billionaire Richard Branson, who flew into space aboard his Virgin Galactic spaceplane, Jeff Bezos blasted off with his brother Mark and two history-making passengers: 82-year-old aviation pioneer Wally Funk, the then oldest person to fly in space, and Oliver Daemen, an 18-year-old Dutch student who is the youngest ever to fly in space. All of these next-generation crewed space flights clearly mark the beginning of new era in humanity's reach into space... an era in which space travel is being democratized for many.

Our state is at the center of this new space era! Florida played the dominant role in the remarkable growth in U.S. space launch activity,

## 31 U.S. LAUNCHES FROM FLORIDA

supporting our nation's space security, exploration and the commercial space marketplace. Last year the U.S. led the world with 38 orbital launches, and 31 of those were launched from Florida. More importantly,

Florida's spaceport system launched over 550 metric tons of payload to space, so important to the future of space commerce!

This year also saw an extraordinary increase in the number of satellites launched into service. In 2021, the number of satellites launched was three

times that of the prior year, and forecasts of satellite demand reflect upwards of 50,000 new satellites to be launched by the end of the decade. As Florida continues building its Spaceport System, we are committed to establishing a Launch-on-Demand and a Satellite-on-Demand capability in our state, to serve future market needs!

Though we continued to respond to pandemic and industry disruptions, we successfully recruited and attracted new aerospace opportunities to Florida, reflecting industry's focus on seeking out the best place for their future operations. As next-generation aerospace companies look to invest in new facilities, modernize and increase productivity or lower operating costs, they are seeking Florida in growing numbers. Our aerospace ecosystem is compelling, enabling them to take advantage of our friendly business environment, highly trained workforce, proven infrastructure and quality of life for their workforce.

Space Florida is working with other state economic development partners to create an energized driving force in recruiting these companies to the Sunshine State.

We have good reason to be enthusiastic about our future in aerospace!

PERFORMANCE YEAR 2021

# ANNUAL OUTCOMES

In PY2021, Space Florida recruited, retained and expanded 15 space and aerospace-related companies and more than 5,220 jobs. Additionally, Space Florida implemented 15 State strategies, noted in the “Florida Strategic Plan for Economic Development,” in PY2021. The annual number of research projects, partnerships and grants supported by Space Florida in PY2021 was 30.

State of Florida is vital to our efforts, providing us the leverage we need to enable new business development each year. Because of the State’s trained workforce, incentives and infrastructure, Florida continues to attract and expand aerospace and high-tech companies. Space Florida’s ongoing efforts maintain that Florida is the Place for Space.

We are pleased to share Space Florida’s top projects and outcomes for PY2021 in the following pages.



**15**  
**SPACE & AEROSPACE-RELATED COMPANIES**  
*recruited, retained & expanded*



42

COMPLETED  
LAUNCHES



5,220

APPROXIMATE JOBS  
*recruited, retained  
& expanded*



33

COMPLETED LANDINGS  
*(3) Landing Zone-1  
(30) Drone Ship Landings*



8

HUMANS  
*launched from  
Florida*



30

RESEARCH PROJECTS,  
PARTNERSHIPS & GRANTS  
*supported*



15

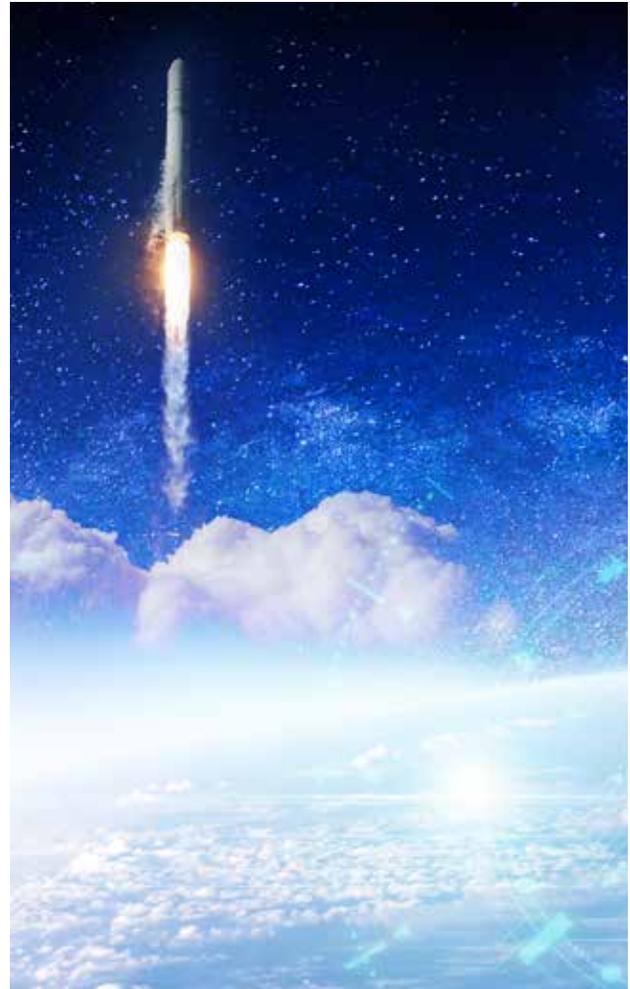
STATE STRATEGIES  
*implemented*

# SPACE FLORIDA'S CORE VALUES

In January 2020, Space Florida introduced a plan to create corporate core values as part of its larger strategic outlook.

A committee of seven was selected to undertake the task of crafting these core values, and in the months to follow, that team worked diligently to gather input from Space Florida staff, feedback from executive leadership and identify themes. In drafting core values, the committee recognized that Space Florida's corporate core values must be unique to the organization, authentic yet challenging, actionable, simple to recall and relevant both internally and externally. The successful staff-driven exercise defined and established five Core Values for Space Florida which identify the organization for its employees as well as its stakeholders.

After months of deliberation, Space Florida introduced the Core Values to its staff and Board of Directors in October 2020. Following the rollout, the committee continued to engage Space Florida staff and encourage the organization to embrace the Core Values. Space Florida's Core Values are the foundation stones for its future, and they define the organization and the principles by which Space Florida and its employees live.



**In June 2021, a new Core Values committee was selected to continue the work of the original committee and address how to best maintain Core Values behaviors while bringing new ideas to the table.**



## SPACE FLORIDA IS PLEASED TO PRESENT ITS CORE VALUES



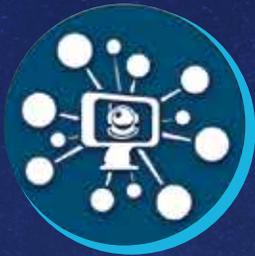
### WE PURSUE GROWTH

Driving expansion and diversification of our industry is central to all that we do. We are dedicated to improving the lives of our peers through personal and professional growth, while creating new opportunities that lift our communities



### WE EMBRACE NEW THINKING

Innovation is integral to building upon Florida's rich aerospace heritage. New ideas paired with disciplined decision-making allow us to adapt, improve and lead in a rapidly changing world.



### WE CHAMPION COLLABORATION

By having shared purpose and vision with our teammates, clients and partners, we achieve more. Together, we are stronger by actively supporting a culture of trust and respect.



### WE STRIVE FOR EXCELLENCE

Through a commitment to professionalism, we produce lasting value for our customers and stakeholders. We take pride in our work and believe that how we treat one another is just as important as the quality of service we provide.



### WE ENCOURAGE BALANCE

Harmonizing work responsibilities with personal wellbeing boosts productivity and engagement. Balancing innovation and growth with heritage and environmental stewardship is crucial to our success and that of our customers, communities and industry.



# STATEWIDE REACH

With sound economic policies in place, backed by outstanding political leadership, Florida has been a global leader in many measures of economic recovery as we turn the corner on the pandemic. In fact, over the last year, economists from the Florida Chamber of Commerce found that Florida moved up two slots from 17th to the 15th largest global economy – if Florida was a country. On the manufacturing front, Florida companies grew job creation in all this category by six percent (6%) over the last 5 years – landing Florida at the #2 spot of all states for job creation in this category.<sup>1</sup>

The state's global leadership in aerospace has been a significant part of Florida's rapid economic recovery and ascension nationally and globally. Many of the projects highlighted in this annual report contributed to the state's economic growth and recovery. Moreover, despite the effects on an ongoing pandemic on state, national and global economies, thanks to an ever-expanding deal log, Space Florida continues to see strong statewide economic indicators of growing aerospace activity.

Space Florida has long enjoyed a robust statutory toolkit. Since its inception, board guidance, management guidance and staff focus has resulted in Space Florida facilitating more than \$2 billion in transactions statewide between Space Florida and client investments, having the look and feel of a mid-cap company – like an Avis Budget Group or a Dunkin Donuts. Not resting on past successes, Space Florida undertook significant steps this past year to meet a goal of facilitate over \$10 billion in industry transactions by 2030 and position Florida as the epicenter of aerospace commerce and workforce talent.

Steps undertaken in 2021 included a realignment of the organization's market-facing efforts into two business units and the start of an implementation of a VMOST (Vision, Missions, Objectives, Strategies, Tactics) framework at every level of the organization. As a result, the organization is beginning to see an alignment of some of the VMOST planning at a tactical level – from improved marketing and communication strategies, some of which are highlighted in this report, to increased partner engagement throughout every region, of the state.

Realizing the import of local partners “on the ground” to the growth of the state's aerospace industry, Space Florida engaged partners in over 50 of Florida's 67 counties over the last year – including visits in many rural counties with aerospace supply chain activity like Baker, Bradford, Calhoun, Glades, Gulf, Hendry, Highlands and Okeechobee counties. In most instances, these engagements were project related from generated leads. In other cases, it was Space Florida's intent to meet with local economic development entities, making these partners aware of how the Space Florida toolkit could be leveraged for the benefit of their local communities. A precursor for many of these local meetings was often an interaction through Space Florida's involvement in Enterprise Florida Stakeholder Council meetings.

<sup>1</sup> Florida 2030 Blueprint July 2021



*Orlando, Florida*

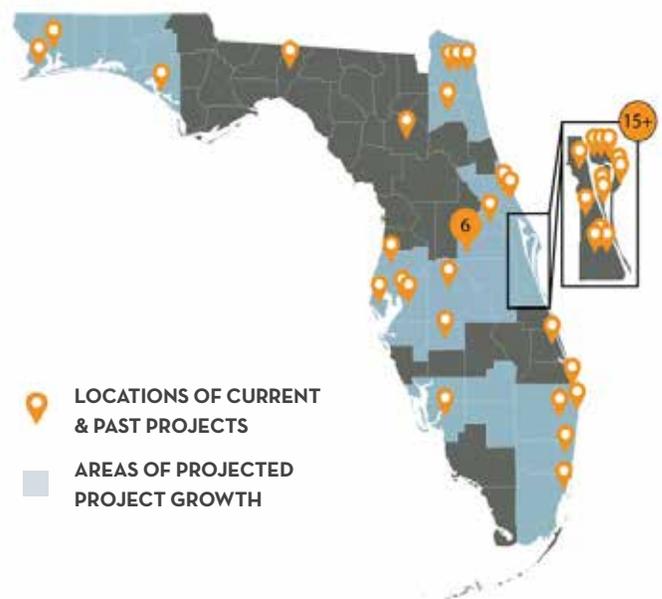
# STATEWIDE REACH

Partnership engagement and lead generation, in many of Florida's rural communities, and particularly those in the Florida panhandle region continued to be strong this past year. Space Florida's continual presence in these communities in recent years have flourished because of relationships with regional organizations like Triumph Gulf Coast and Florida's Great Northwest as well as participation in events like board meetings and TeCMen Industry Day in Destin-Fort Walton Beach. However, Space Florida securing non-recourse debt in the capital markets and structuring conduit leases with industry in a manner ensuring that the local communities have an enduring asset (facilities with strong residual value) has been of particular interest to these partners. New and nontraditional partners were also engaged over the last year. With the utilization of deep-water ports in Canaveral and Pensacola by space companies like Blue Origin and SpaceX, Space Florida begin to engage more formally with the Florida Ports Council. Other nontraditional partners included the Society of Industrial and Office Realtors (SIOR), local realtor organizations in the South Florida market, and the Florida Association of Property Appraisers.

Beyond the direct partner engagement activities, the "new normal" of holding virtual meetings due to the pandemic has also had a positive impact on Space Florida's business development activity. The previous limitations of physical meetings are less of a constraint for Space Florida to effectively work with economic development partners and client

companies. In person meetings are still preferred in certain situations, but the ability to continue pursue opportunities throughout the state utilizing various technology has been a positive development.

The aerospace and space industry in Florida reaches almost every corner of the state. There has been significant activity at the Space Coast with more than 15 past and current projects tallied, but as the graphic on this page demonstrates, Space Florida counts more than 30 past and current projects outside of the Space Coast.



## Types of projects include:

- MRO (maintenance/repair/overhaul)
- Research and development
- Manufacturing
- SCIF (sensitive, compartmented, information facility)



Announcements are just the beginning of the project implementation. From interacting with the companies to secure financing to project management and procurement until completion, Space Florida actively works “behind the scenes” to get the project from the announcement to a groundbreaking and ribbon cutting and beyond. This “behind the scenes” work often spans multiple years beyond project announcements and was a focus of the organization over the past year. For example, projects like Davinci (Leonardo Aerospace) and Upgrade (CAE) were announced by the companies and Governor DeSantis in previous years. However, Space Florida’s efforts to ensure successful project implementation has been continuous – often out of the sight of the public and even other partners who also worked to secure the projects to Florida. With a focus on client delivery, coupled with an experienced staff of architectural, engineering, legal and project management skill sets, Space Florida has developed a competitive advantage in completing the “behind the scenes” work. This is a distinguishing hallmark of Space Florida and necessary for successful project outcomes.

Looking forward, Space Florida’s deal pipeline has expanded geographically as well as in breadth within the aerospace industry. Over the past year, Space Florida has active aerospace opportunities in counties throughout the state in the areas of projected growth. Not only are the typical aerospace hubs represented but the types of companies in the aerospace industry ecosystem has also expanded.

In all, outreach efforts to local, regional, and state level economic development partners, and improved marketing and communication strategies, have paid dividends in expanding Space Florida’s deal log as those partners have a better understanding of how to position Space Florida’s toolkit as part of the value proposition when working with aerospace, space or defense related companies evaluating a Florida location. Moreover, the continuity and project experience of Space Florida’s team has positioned the organization well in the market place and will continue to pay dividends going forward.



### SIMCOM INTERNATIONAL, INC. (ORLANDO)

In 2020, SIMCOM International, Inc., announced its expansion and new worldwide headquarters in Orlando. The company, which currently operates two learning centers in Orlando, is investing \$109 million in a new headquarters and training facility and plans to create more than 50 new high wage jobs over the next two years. The new location will house a state-of-the-art training center including the addition of five new CAE full-flight simulators.

SIMCOM is moving its headquarters from its previous location on Lee Vista Road to Lake Nona. The proximity to the downtown district of the master-planned Lake Nona community will give its customers access to high quality lodging, leisure, dining, and entertainment options as they complete their training.

SIMCOM serves customers from over 80 countries worldwide, providing pilot and maintenance training across a variety of general aviation, business and commercial aircraft types. The company has long standing relationships with many of the world’s aircraft manufacturers, aircraft owners, commercial airlines and business aircraft operators.

Central Florida has a long history in aviation and aerospace, from the world’s first commercial aircraft flight to the present day launches into space at Cape Canaveral. The region serves as a major center for flight training due to its year-round flying weather, hyper-connected air access and robust aviation and aerospace workforce. These assets have helped Orlando become the world’s epicenter for simulation and training.

# FLORIDA SPACEPORTS SYSTEM

Since 1999, Florida has designated space as an official mode of transportation and spaceports as the associated transportation facilities. This official designation recognizes space in the same manner as other long-established modes such as roads, rail, airports and seaports.

Space Florida, as Florida’s Space Development Authority, facilitates investment in Space Transportation infrastructure across the Florida Spaceport System. Space Florida works closely with the Florida Department of Transportation” to coordinate and cooperate in the development of spaceport infrastructure and related transportation facilities...” —SECTION 331.360 (1), FLORIDA STATUTES

Moreover, in 2019, the Florida Department of Transportation (FDOT) highlighted the importance of Space as a mode of transportation by establishing a new Spaceport office. With this designation, spaceports and space transportation were aligned to help FDOT achieve its primary responsibility “to assume the responsibility for coordinating the planning of a safe, viable, and balanced state transportation system serving all regions of the state, and to assure the compatibility of all components, including multimodal facilities.” —SECTION 334.044(1), FLORIDA STATUTES

FDOT and Space Florida work closely together to plan and facilitate space transportation services on spaceport territories throughout the state. Florida’s Spaceport System Plan guides the investment opportunities and provides a forward-looking vision and planning tool for strategically managing Florida’s on-going initiative to be a world leader in global space transportation and the industries it supports. There are currently three Spaceport Territories with FAA-licensed launch sites in the State of Florida:



Cecil Spaceport

1. **Cape Canaveral Spaceport**, as identified in Florida Statute 331.304(1), collectively refers to both NASA’s Kennedy Space Center (KSC) and the Cape Canaveral Space Force Station (CCSFS). NASA and the U.S. Space Force operate and manage KSC and CCSFS, respectively, and Space Florida provides management and operation of key spaceport elements including Exploration Park, the Launch and Landing Facility, and Space Launch Complexes 46 and 20.
2. **Cecil Spaceport** in Jacksonville
3. **Space Coast Regional Airport and Spaceport** in Titusville

The Federal Aviation Administration’s (FAA) licensure of the Space Florida’s Launch and Landing Facility at the Cape Canaveral Spaceport was issued in November 2018 and amended to add the re-entry site operator license in January 2021. The FAA’s licensure of Jacksonville’s Cecil Spaceport was in 2010 and the licensure of the Space Coast Regional Airport/ Spaceport occurred in May 2020. These commercial



spaceports, coupled with the potential for additional system elements in the future, puts Florida in the position of having an expanding system of spaceports.

As Florida's statewide Spaceport Development Authority, Space Florida provides industry with access to capital and invests in key infrastructure across Florida's Spaceport System.

*"I'm incredibly grateful for the partnership that Cecil Spaceport has with Space Florida. The entire staff has gone out of its way to demonstrate that they consider Cecil a crucial part of the commercial space landscape in Florida, and the financing and development tools they possess are an incredible competitive advantage for our State. We really couldn't do what we do without Space Florida."*

—MATT BOCCHINO, MANAGING DIRECTOR, CECIL SPACEPORT

## SIERRA NEVADA CORPORATION

In May 2021, Space Florida announced it had entered into a Use Agreement for Sierra Nevada Corporation's (SNC) use of Space Florida's Launch and Landing Facility (LLF) for reentries of SNC's Dream Chaser® spaceplane in support of NASA's Commercial Resupply Services (CRS)-2 contract. The agreement will make LLF the first landing site for Dream Chaser® when it returns from its first NASA mission in late 2022.

The Use Agreement provides SNC use of the runway, support facilities and other services during testing and landing to ensure a safe and successful return of Dream Chaser® and its cargo from the International Space Station (ISS).

Under the CRS-2 contract, Dream Chaser will transport cargo to the ISS and land at the LLF. Dream Chaser® will launch on United Launch Alliance's (ULA) Vulcan Centaur launch vehicle and can deliver more than 5,400 kilograms of cargo to the ISS. Landings will occur under Space Florida's FAA Reentry Site Operator License (RSOL) and SNC's eventual FAA Reentry Operator License (ROL). The Use Agreement makes SNC the first commercial user of Space Florida's RSOL. This activity expands the Spaceport's capability to support commercial space companies at the world's premier spaceport.



In addition to the runway, SNC will also use Space Florida's Reusable Launch Vehicle Hangar, Convoy Vehicle Enclosure, also known as the T-Shelter, and midfield area for pre- and post-landing operations. The runway and these facilities will also be used for a pathfinder test and other test events prior to reentry. Dream Chaser® has the potential to land at any FAA licensed landing site that has a suitable 10,000-foot runway capable of handling a typical commercial jet. In January, Space Florida announced the issuance of its RSOL from the FAA Office of Commercial Space Transportation, making the LLF for first commercial licensed reentry site.

Space Florida and SNC worked closely on the FAA application for the RSOL. The application process included demonstrating through analysis that a reentry vehicle could land at the site while maintaining public safety. The license allows the Cape to support Dream Chaser® reentries as well as other orbital reentry vehicles.

*"This is a monumental step for both Dream Chaser® and the future of space travel, to have a commercial vehicle return from the International Space Station to a runway landing for the first time since NASA's space shuttle program ended a decade ago will be a truly historic achievement."*

—FATIH OZMEN, CEO & OWNER, SNC

# FLORIDA SPACEPORTS SYSTEM

## SPACE FLORIDA'S LAUNCH AND LANDING FACILITY

In June, Space Florida began the first phase of development at the Launch and Landing Facility (LLF), marking the next big step in attracting industry to Florida's Cape Canaveral Spaceport. The more than one-mile-long utility corridor project will provide power, water and communications service to large portions of property adjacent to the LLF, opening up development opportunities for companies wishing to join the Cape's growing commercial space ecosystem. The LLF joins the Cecil Spaceport and Space Coast Regional Air and Spaceport as part of Florida's Spaceport System to serve increasing commercial and government aerospace missions.

With the utility corridor in works, Space Florida's LLF is a prime location for future development for commercial aerospace customers. With over 400 acres of both air and land-side developable property in the first phase, potential uses include aircraft or spacecraft operational hangars, office space, passenger training and operations facilities; aerospace manufacturing, processing and assembly facilities; and propellant and fueling facilities.

At 15,000 feet long and 300 feet wide, the LLF is one of the longest and most capable runways in the world. Strategically located in the heart of Florida's aerospace ecosystem at the Cape Canaveral Spaceport, the LLF is located away from populated areas and provides access to restricted airspace. Other features of the LLF include the air traffic control tower; navigational and landing aids; and fire and emergency response services.

Florida designates space as an official mode of transportation, and Space Florida works closely with Florida Department of Transportation on the Spaceport Improvement Program to make critical investments in Florida infrastructure to accelerate the growth of the aerospace industry in Florida. Space Florida is in active dialog with multiple companies exploring near term capacity development at the LLF.



In 2015, NASA formally transferred the operations and maintenance of the former Shuttle Landing Facility to Space Florida, opening up new commercial capacity for the LLF. In 2018, Space Florida secured a Launch Site Operators license for the facility from the Federal Aviation Administration. Space Florida received the Reentry Site Operators License from the Federal Aviation Administration in early 2021.

“The Florida Department of Transportation congratulates Space Florida and its partners as they begin the construction of the spaceport Launch and Landing Facility utility corridor, this is another critical investment as Florida leads the way in commercial space development creating statewide economic opportunities for generations to come.”

—KEVIN J. THIBAUT, SECRETARY, FDOT



## POLAR LAUNCH CAPABILITY IN FLORIDA

In August 2020, polar launch capabilities returned to the Cape Canaveral Spaceport. The SpaceX Falcon 9 SAOCOM IB mission from Space Launch Complex (SLC) 40 marked the first polar launch from the Cape in more than 50 years. Prior to the launch, launch providers in the U.S. have been restricted to only launch sites in California or Alaska to service polar launch trajectories, requiring an inefficient duplication of infrastructure and workforce at multiple sites in order to service all orbits.

The return of polar and sun-synchronous orbit launch capability presents an opportunity for launch providers to satisfy almost any orbital launch requirement from Florida. A single site allows companies to leverage the operational and economic benefits of consolidating operations, including streamlined launch licensing and range compliance, increased efficiency of maintaining a single workforce, simplified launch site configuration management, proximity to manufacturing and supply chain, and more efficient logistics for shipping and transport. Additionally, the manufacture and assembly of government and commercial payloads can now benefit from the consolidation of operations at a single launch head.

The pioneering efforts of SpaceX have led to the successful transition from traditional human-in-the-loop flight safety systems to software-controlled autonomous flight safety systems has been a critical enabler for the return of polar launch capabilities to the Cape, which has opened the use of a southern flight corridor off the east coast of Florida without compromising a rigorous commitment to public safety.

Having demonstrated polar launch capability at the Cape offers increased flexibility to access a much wider range of orbits, providing commercial operators the opportunity to consolidate launch operations to one site that can meet all customer requirements.



*Polar Launch*

# GOVERNMENT RELATIONS & COMMUNITY INVOLVEMENT



## U.S. SPACE COMMAND

U.S. Space Command (USSPACECOM) was established as the military's 11th unified combatant command in 2019, and the Air Force was tasked with managing the site selection process for its headquarters. Florida was one of 24 states that submitted nominations last June; Governor DeSantis endorsed eight Florida communities as candidate locations. Of those, the Brevard County proposal made it to the list of six final candidate sites. After conducting virtual and on-site visits, the Air Force announced in January 2021 that Huntsville, Alabama was selected as the preferred headquarters location. Space Command is provisionally based in Colorado, and the Air Force anticipates finalizing the site in spring 2023, pending the results from the required environmental impact analysis. Albuquerque, New Mexico; Bellevue, Nebraska; Cape Canaveral, Florida; Colorado Springs, Colorado; and San Antonio, Texas, remain reasonable alternative locations for the U.S. Space Command Headquarters.

Space Florida congratulates the collective efforts of all interested communities, the Florida Defense Support Task Force, Florida Defense Alliance and our state and federal elected officials. This teamwork will continue to pay dividends as the state pursues other opportunities to house future military space programs, missions, and units to meet the threats of the future.

## SPACE FLORIDA IN THE COMMUNITY

For more than 15 years, Space Florida has been a proud supporter of United Way. As part of its mission to grow the aerospace ecosystem in the State of Florida, Space Florida is committed to supporting the communities in which its employees and the industry live. In 2020, Space Florida's workplace campaign yielded a 100% participation rate and raised more than \$35,000 to United Way and its partner agencies.

*“United Way is so appreciative of our longstanding relationship with Space Florida. Over the past five years alone, Space Florida's staff team has contributed over \$259,000 to UW's community-wide campaign. Their generous level of support has provided the power to give some of Brevard's most vulnerable citizens a chance for change – literally transforming lives. Additionally, Space Florida sets a great example for other businesses by going the extra mile to make their campaign FUN each year by hosting a trivia night. United Way is sincerely grateful to Frank DiBello and the entire Space Florida team for their amazing support.”*

—ROB RAINS, PRESIDENT, UNITED WAY OF BREVARD



# RESEARCH, INNOVATION & SPECIAL PROJECTS



In PY2021, Space Florida continued its partnership with the Florida Venture Forum, Florida's largest statewide support organization for investors and entrepreneurs. As of June 30, 2021, Space Florida supported capital accelerators have attracted more than \$538 million in funding and investments for the participating companies.

## 2020 FLORIDA EARLY STAGE CAPITAL CONFERENCE

Space Florida and the Florida Venture Forum named Techfit Digital Surgery, Switched Source and HealthMe Technology as the winners of the all-virtual 2020 Florida Early Stage Capital Conference held in October 2020.

A panel of judges reviewed each selected company's presentation and supporting materials. Grand Prize Winner Techfit Digital Surgery will receive \$40,000 of Space Florida's Accelerating Innovation (AI) Award, while 1st Runner-Up Switched Source will receive \$30,000 and 2nd Runner-Up HealthMe Technology will receive \$20,000.

Additionally, Hannah Herbst with Tiburon Technologies representing Florida Atlantic University won the 10th Annual Statewide Collegiate Startup Competition and will receive \$10,000. In all, ten universities were selected to compete in the Statewide Collegiate Startup Competition. Teams were made up of two to three students per each university. Presenting universities also included Embry Riddle, University of Florida, Florida Polytechnic University, Florida State University, Florida Gulf Coast University, Rollins College and Florida International University.

**Techfit Digital Surgery, Daytona Beach** aims at making customized implants the new standard of care for musculoskeletal pathologies providing a complete solution. This solution starts with the patient's imaging (CT/MRI), they then convert this into a 3D model of the patient that they then use to interact with the surgeon and plan the treatment and if needed print models for surgical trial workshops. Once the treatment plan is approved by the surgical team the company uses 3D printing and other advanced manufacturing technologies to manufacture custom implants and instruments that fit the patient perfectly as opposed to finding the best fit out of a stock of existing material.

**Switched Source, Vestal, New York** has developed a new set of power system devices for electric utilities that improve the resiliency, efficiency, and distributed energy resource hosting capacity of the grid. Switched Source's power-electronics based technologies were designed for utility applications with support from G&W Electric, the US Department of Energy, New York State Energy Research and Development Authority (NYSERDA), and input from three utilities on the east coast. These utilities are engaged in demonstration projects for distribution investment deferral, phase balancing, and solar hosting applications.

**HealthMe, Naples** is a software platform, founded by a doctor, to accommodate the growing number of patients who choose to pay directly for their healthcare ("direct-pay"). Its direct-to-consumer solution brings patients a digital marketplace for transparently priced bundled healthcare, and medical practices the tools, training, and support to streamline their direct-pay business.

**EARLY STAGE CAPITAL CONFERENCE**

**TECHFIT**

**\$100,000 GRAND PRIZE WINNER TECHFIT**

*“The people we met and the networking opportunities were incredible! We enjoyed the pitch competition and received some very interesting feedback on our value proposition & technology that will surely put us in better shape for the future of scaling and growth.”*

**Mauricio Toro, CEO  
TechFit Digital Surgery**

# RESEARCH, INNOVATION & SPECIAL PROJECTS

## 2021 FLORIDA AEROSPACE INNOVATION & TECH FORUM

Space Florida and the Florida Venture Forum announced Miles Space, Inc., ecoSPEARS, Doroni LLC and OptiPulse, Inc., as the winners of the all-virtual 2021 Aerospace Innovation and Tech Forum. The event, the sixth annual aerospace-focused conference hosted in partnership with the Florida Venture Forum, featured a competition of 20 presenting companies

A panel of judges reviewed each selected company's presentation and supporting materials. Grand Prize Winner Miles Space received \$40,000 of Space Florida's \$100,000 Accelerating Innovation (AI) Award, while 1st Runner-Up ecoSPEARS received \$30,000 and joint Second Place winners Doroni LLC and OptiPulse, Inc., will each receive \$15,000.

“ I would like to thank the panel of judges for nominating Doroni Aerospace for second place at the Florida Aerospace and Innovation Forum. The Florida Aerospace and Innovation Forum was managed professionally and we would highly recommend it to any startup as part of their journey.”

—DORON MERDINGER, CEO, DORONI AEROSPACE

**Miles Space, Inc., Tampa** is an aerospace company that specializes in Signal Processing for Military Passive Radar, SatComs, Drone Detection technology, and our Water Vapor-Based thruster for satellites and space probes.

**ecoSPEARS, Altamonte Springs** is a company that has developed green solutions to eliminate toxins from the environment, so everyone has access to clean water, clean food and clean air. ecoSPEARS is a cleantech company that obtained an exclusive license to NASA-developed environmental cleanup technologies that can permanently eliminate the world's most persistent and toxic environmental contaminants from impacted sediment, soil, and groundwater, forever, displacing the need to dredge, landfill and incinerate contaminated media.



**Doroni LLC, Parkland** includes a multi-disciplinary team that has been leveraging cutting-edge technologies to develop a revolutionary new eVTOL (electric vertical takeoff and landing) platform with semi-autonomous capability that any adult can operate, called the Doroni flying car.

**OptiPulse Inc., Albuquerque, New Mexico** is a company that has developed a communications link which could be described as a wireless extension cord for fiber installations. This link uses a new type of wireless NIR photonics chip that has tested at 25Gbps in simple OOK.

## FLORIDA-ISRAEL INNOVATION PARTNERSHIP: EIGHTH CALL FOR PROJECTS

Space Florida and the Israel Innovation Authority, an independent, publicly-funded agency created to address the needs of the local and international innovation ecosystems, announced the eighth-round winners of industrial research and development funding tied to the Space Florida-Israel Innovation Partnership Program.

In October 2013, Florida and Israel established a \$2 million recurring joint fund to support research, development, and commercialization of aerospace and technology projects that benefit both Israel and Florida. For this Call for Projects, 20 joint proposals were submitted by teams of for-profit companies in Florida and Israel. Four teams have been selected for this eighth round of awards.

The winners are as follows on the next page:



**Craig Technologies (Merritt Island, Florida) & MTI Wireless Edge (Israel)** for the development of an innovative antenna that can be used for space-ground and space-space applications. The existing antenna will be electrically adapted for the required satellite communication frequency band and mechanically redesigned to meet the space environmental requirements. The re-engineering of the existing antenna will provide small satellite manufacturers with additional options for competitive suppliers.

**Everix Optical Filters (Orlando, Florida) & SolCold (Israel)** for innovative nano-particle materials using a dichroic filter to cool down objects using sunlight. With this award, Everix will focus on optimizing the Everix production processes to create the filter-size needed, and SolCold will scale up its cooling particles for the commercialization of SolCold's cooling-by-sunlight products

**Redwire Space (formerly Made In Space), Jacksonville, Florida) & StemRad (Israel)** for the project focusing on conducting on-orbit additive manufacturing of personal radiation shielding vest components from recycled polyethylene. Redwire Space and StemRad will recycle polyethylene from packaging waste into filament for on-orbit additive manufacturing of polyethylene shielding inserts for StemRad's personal radiation protection vests.

**LightPath Technologies (Orlando, Florida) & RP Optical Lab (Israel)** will develop and design an Opto-Electronics Thermal Imaging (OETI) module installed on Nano / Micro satellites. The OETI module will be based on a new developed space-qualified broadband, compact, lightweight, modular, cryogenically cooled infrared motorized camera, utilizing IR optical lens substrates, space-compatible broadband telescope lens and video electronics. The joint team's goal will be the successful space environmental qualification of these cameras and their building blocks.

“ Since its inception in 2013, the Israel-Florida collaboration on space related technologies has managed to produce great projects that could truly make a difference in the aerospace sector. This year we were excited to note an increase in the number of applications submitted compared to last year, as well as the noteworthy high quality of those projects. We strongly believe that the partnership between Florida and Israel, and the success of this collaboration between companies from both countries will further strengthen the ties between the two countries and economies. We wish much success to the winning teams and companies and look forward to the amazing changes they will make on our world and beyond.”

—AMI APPELBAUM, CHAIRMAN, ISRAEL INNOVATION AUTHORITY

## FLORIDA SPACE GRANT CONSORTIUM

The Florida Space Grant Consortium and Space Florida annually and jointly fund the competitive Florida Space Research Program (FSRP). Space Florida provides \$100,000 for research funding, which is included the NASA Florida Space Grant Consortium funds of \$209,813. The purpose of this research funding is to support the expansion and diversification of Florida's space industry by increasing statewide academic involvement in space research, engineering, education and training programs that are consistent with the State's space industry priorities. The program's focus is on space exploration and the technology required to carry out the exploration of Space that are aligned with the priorities of NASA's 4 Mission Directorates (Science Mission Directorate, Human Exploration and Operations, Space Technology and Aeronautics).

Teaming with industry, nonprofit institutions, and federal agencies is strongly encouraged. K-12 collaboration is also encouraged on appropriate projects.

In PY2021, the Florida Space Grant Consortium program funded 12 space research and education grants under the FSRP. The awardees included seven Florida universities. A total of 28 proposals were received. Each submission was independently evaluated by a team of experienced professionals from Kennedy Space Center as well as other universities and NASA centers.

A total of 18 students were supported by faculty from the 12 projects. Seven of those students are undergraduates and 11 are graduate students. Additionally, seven of the awardees were women four were under-represented minorities.

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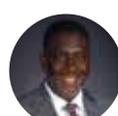
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# LOOKING AHEAD | 2021

**We are now into the first year of a new and exciting decade for the growth of our aerospace industry in Florida. And that first year has been filled with accomplishments that portend what the entire decade will be like. We have every reason to be optimistic about Florida's future and its continued role as the leading global enabler of a new space economy.**

We are continuing to advance the cadence of launches, building on the 31 Florida launches out of last year's 38 from the United States. As of mid-October, we have completed 28 launches — well on our way to a planned 48 for the year from Florida.

We are continuing to invest in new and modernized infrastructure throughout the State Spaceport System. We are building the capability statewide to handle 100 launches a year, accommodate a "Launch-on-Demand and Satellite-on-Demand" capacity, and provide the full logistics support for the broad family of flight platforms and companies emerging to go to space, create value and services there and return that value to the planet. That is true space commerce.

As we observe the continuing transition of the industry from a predominately government-led to increasingly commercial and market driven, we must provide meaningful space policy leadership, a supportive business eco-system and world class infrastructure that will enable next-generation space companies to locate here operate and thrive here. Department of Commerce forecasts show a growth of U.S. space commerce to over \$1 Trillion by the end of the decade, and we are committed to seeing Florida as the leader in enabling that.

We have set goals for the state that reflect achieving space industry leadership for our state. In this last decade, we have taken the value of the portfolio of infrastructure financed from just under \$100 million, to over \$2.7 Billion today. Our goal for the next decade is to take that portfolio value to over \$10 Billion by the end of the decade focused on both ground and in-orbit infrastructure for research, manufacturing and new commercial service activities which will drive this new Cis-lunar space economy for Florida and the nation. We have also set goals for the growth of the state's aerospace workforce, taking Florida's place in this critical area from 7th in the nation to 4th or better!

There is also a third goal related to capital formation. Space Florida is a financial institution, enabled by the powers and capabilities defined in its statute. To achieve the industry growth goals we have set for the state in this next decade, will also open up new sources of private sector capital and financial institution trading relationships which are the fuel for the entrepreneurial and technology-driven eco-system that will propel Florida's space and aerospace industry to becoming the "place to be for aerospace" embodied in our goals.

Industry, both domestic and global, have already recognized Florida as having the business, technology and operating environment that they need to thrive! Our state is committed to the advancement of research, technologies and products that solve the challenges of developing and integrating next generation AI and intelligent algorithms into infrastructure that will enable next generation autonomous vehicles, EVTOL, air taxi, air- and space-enabled transportation systems and destination hardware which are Florida's aerospace future!



**FRANK DIBELLO**  
PRESIDENT & CEO,  
SPACE FLORIDA



*The future of Florida's aerospace industry is very bright, and will continue to be an important part of Florida's future economy!*

# REMEMBERING JIM KUZMA

In early 2021, Space Florida lost a dear friend and respected colleague with the passing of James “Jim” Kuzma, USN (Retired).

In his role as Senior Vice President and General Manager, he was responsible for handling industry and spaceport development for the Cape Canaveral Spaceport. But more than that, he was a friend, colleague and mentor who poured his heart and selfless style into the Space Florida team and its vision.

Jim was a proud sailor, having served more than 20 years in the United States Navy, finishing his career as the commanding officer of the Naval Ordnance Test Unit (NOTU) based in Cape Canaveral, Florida. He also served as a division chief for the U.S. Strategic Command in Washington D.C., and as a deputy director for Submarine Forces in Norfolk, Virginia. Jim’s decorations from his naval service include a Bronze Star, Legion of Merit, Defense Meritorious Service Medals and various unit and service awards. He never talked about them. He didn’t need to.

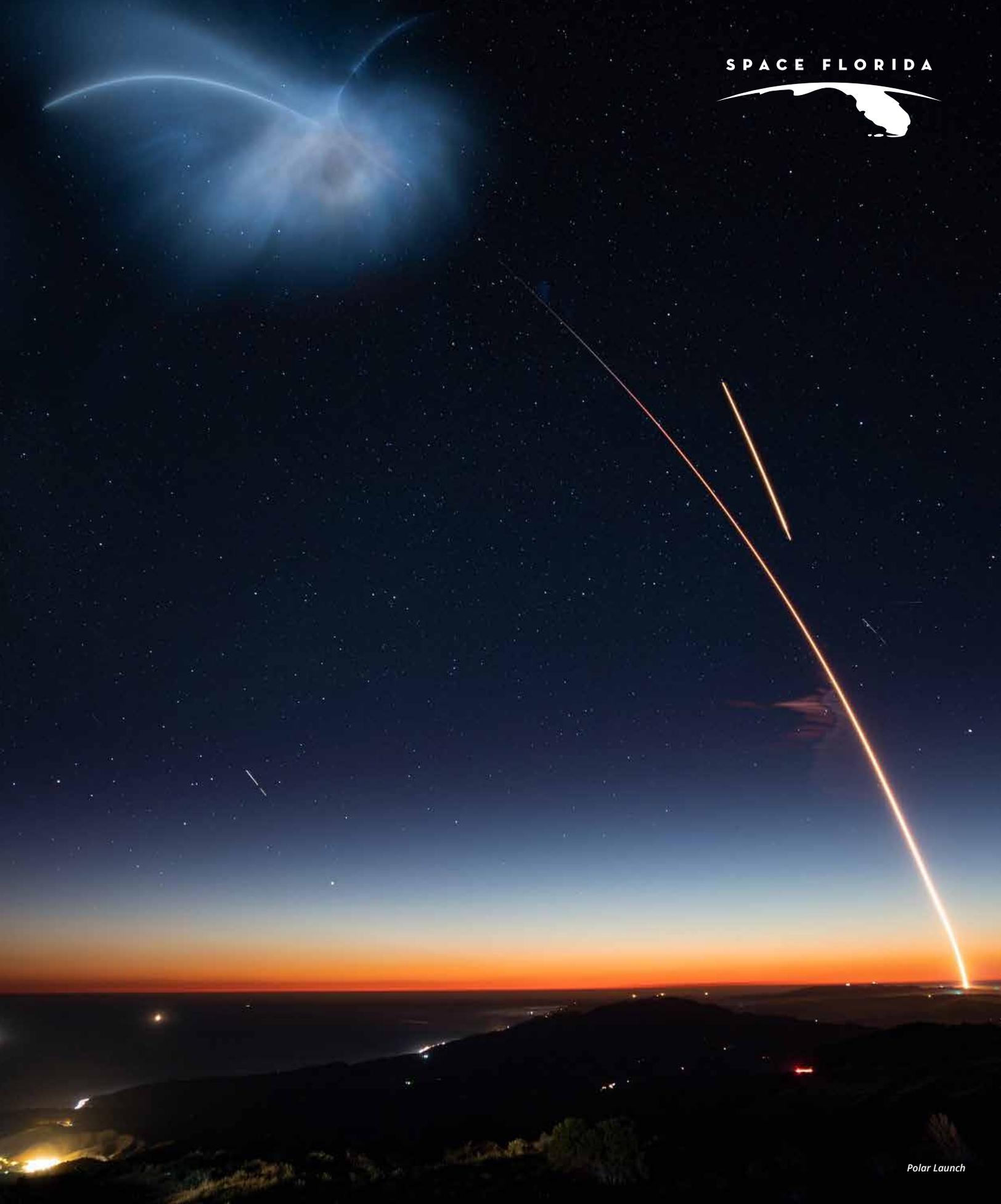
Jim will be remembered for his leadership and strategic perspectives both in the military and at Space Florida. He never wavered in his commitment to Florida’s ever-changing aerospace industry and Space Florida’s mission, and he always had a Navy yarn or nicknames to give his colleagues a laugh. If you spent any time at all with Jim, you knew his stories from his experiences on or under the high seas and down into the bowels of the Pentagon.

Family was at Jim’s core; he was a devoted husband and father, and absolutely adored his grandchildren. He was also a passionate supporter of United Way and the Navy League and other community causes. His, was truly a life rich in family, friends, and adventure. Jim’s insights, collaborative style and sense of humor will be deeply missed, though his dedication and commitment to his life’s work will endure.



**JAMES KUZMA**  
1961 - 2021





*Polar Launch*

**S P A C E F L O R I D A**



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